

CLAIMS

1-23. (Canceled)

24. (Original): A method for the decoration of a porous ceramic substrate, comprising: 1) applying a colorant composition comprising a colorant material and a carrier on at least a portion of a ceramic substrate having surface microporosities, such that said colorant composition penetrates the pores of said ceramic substrate; 2) applying a hardenable resin on the treated portion of the ceramic substrate, 3) polymerizing or drying said hardenable resin to fix the colorant material to the ceramic substrate.

25. (Original): The method according to claim 24, wherein said colorant material is a pigment or dye suitable for application on ceramic substrates.

26. (Original): The method according to claim 24 comprising the application of a pigment dispersed in a volatile dispersing agent.

27. (Original): The method according to claim 24, wherein said pigment comprises a pigment selected from natural, organic, effect pigments such as metallic, metallescent, micalized pigments and their mixtures.

28. (Original): The method according to claim 24, wherein said application phase is carried out by means of a manual technique selected from pads, brushes, aerographs, or a non-manual technique selected from flexography, screen-printing, gravure printing, digital printing, offset printing, roller coating, curtain coating, spray, vacuum.

29. (Original): The method according to claim 24, wherein it comprises an intermediate drying phase of the

dye or pigment applied.

30. (Original): The method according to claim 24, wherein it comprises a final polishing phase of the decorated ceramic substrate.

31. (Original): The method according to claim 24, wherein said hardenable composition is a photo-curable resin or a composition curable with ultraviolet rays (UV).

32. (Original): The method according to claim 24, wherein said irradiation is effected by exposure to an electromagnetic radiation with a wavelength ranging from 100 to 780 nm.

33. (Original): The method according to claim 32, wherein said irradiation is effected by exposure to UV-VIS rays.

34. (Original): The method according to claim 31, comprising the application of a quantity ranging from 0.1 to 25 g/m.^{sup.2} of said photo-curing composition on the substrate to be treated.

35. (Original): The method according to claim 31, wherein said photo-curing composition comprises a prepolymer selected from radicalic systems, cationic systems and their mixtures.

36. (Original): The method according to claim 35, wherein said prepolymer is a radicalic system selected from the group consisting of unsaturated polyesters, epoxy acrylates, urethane acrylates, aromatic urethanes, aliphatic urethanes, polyester acrylates, polyether acrylates, acrylic acrylates and their mixtures.

37. (Original): The method according to claim 35, wherein said prepolymer is a cationic system selected from the group consisting of epoxy monomers, epoxy oligomers, polyols, vinyl-ethers, glycols and their mixtures.

38. (Original): The method according to claim 31, wherein said curing composition further comprises one or more reactive diluents and/or additives selected from the group consisting of adhesion promoters, wetting agents, surface-active agents, light stabilizers, bactericides, fluorinated monomers, abrasion resistance additives, dispersing agents, viscosity modifiers, fillers, pigments, polymerization inhibitors, stabilizers.

39. (Original): The method according to claim 31, wherein said curing composition comprises at least one photoinitiator.

40. (Original): The method according to claim 39, wherein said photo-initiator is selected from the group consisting of alpha-hydroxyketones, alpha-aminoketones, acylphosphinoxides, thioxantones, benzophenones, oxymesters, anthracenes, benzyl-dimethyl-ketals, benzoin ethers, amines and their mixtures.

41. (Original): The method according to claim 24 wherein the application and curing phases by means of irradiation are repeated two or three times on the same ceramic substrate.

42. (Original): The method according to claim 24 comprising a preliminary treatment phase of said ceramic substrate with a solution at acid pH.

43. (Original): The method according to claim 24, wherein the hardenable composition is selected from the

group consisting of waterborne and solvent based Alkyd resin (e.g. Synolac, Gelkyd, Unithane, Synaqua--CRAY VALLEY; Uralac, Urathix, Uradil--DSM; Alkydal--BAYER; Laropal--BASF; Vialkyd, Daotan, Resydrols--VIANOVA), waterborne and solventbased Acrylics; waterborne, solventbased or 2-pack Epoxies, waterborne and solventbased Saturated polyesters, waterborne, solventbased or 2-pack Polyurethanes, Phenolic resins or phenolplasts and their mixtures.

44. (Original): A method for the decoration of a porous ceramic substrate, which comprises: A) applying a hardenable coloring composition comprising a colorant material and a hardenable resin on at least a portion of a ceramic substrate having surface microporosities, such that said hardenable coloring composition penetrates the pores of said ceramic substrate; B) polymerizing or drying said hardenable coloring composition to firmly fix the colorant material to the decorated ceramic substrate.

45. (Currently amended): The method according to claim [[43]] 44, wherein the hardenable coloring composition is a photocurable resin.

46. (Currently amended): The method according to claim [[43]] 44, wherein the hardenable composition is selected from the group consisting of waterborne and solvent based Alkyd resin (e.g. Synolac, Gelkyd, Unithane, Synaqua--CRAY VALLEY; Uralac, Urathix, Uradil--DSM; Alkydal--BAYER; Laropal--BASF; Vialkyd, Daotan, Resydrols--VIANOVA), waterborne and solventbased Acrylics (e.g. GLASCOL--Ciba Specialty Chemicals; waterborne, solventbased or 2-pack Epoxies, waterborne and solventbased Saturated polyesters, waterborne, solventbased or 2-pack Polyurethanes, Phenolic resins or phenolplasts and their mixtures.